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Mr. Stephen Johnson  
State of Delaware  
Division of Air and Waste Management  
Department of Natural Resources  
and Environmental Control  
715 Grantham Lane  
New Castle, Delaware 19720-4801

Dear Steve:

Enclosed is the Monthly Progress Report for October 1991 for the Dover Gas Light site in Dover, Delaware.

Please let me know if you have any questions regarding this report.

Very truly yours,



David C. Durant  
Project Manager

DD/srs

Enclosure

6527MPR\_DOVER-OCT-1991\_JS\_SRS

cc: Ed Dunlap, Chesapeake Utilities  
Randy Sturgeon, U.S. EPA  
Nancy Berenson, Morgan, Lewis & Bockius  
Art Jung, Consoer Townsend & Associates

AR301115



**MONTHLY PROGRESS REPORT NO. 8**

**DOVER GAS LIGHT SITE RI/FS**

**FOR THE PERIOD ENDING**

**OCTOBER 31, 1991**

Prepared by:

Versar, Inc., for:  
Chesapeake Utilities Corporation  
350 South Queen Street  
Dover, Delaware 19901

Prepared for:

State of Delaware  
Division of Air and Waste Management  
Department of Natural Resources  
and Environmental Control  
715 Grantham Lane  
New Castle, Delaware 19720-4801

November 8, 1991

AR301116

## 1.0 INTRODUCTION

The purpose of this monthly progress report on activities relating to the Remedial Investigation and Feasibility Study (RI/FS) underway at the Dover Gas Light Site in Dover, Delaware, is to provide all parties with information on current and ongoing activities at the site, identify pertinent information obtained, and discuss any problems encountered.

The report meets the objective of Part VII, Subpart K of the Consent Order between Chesapeake Utilities Corporation (CUC), the U.S. Environmental Protection Agency (EPA), and the State of Delaware's Department of Natural Resources and Environmental Control (DNREC).

## 2.0 PROGRESS REPORT

### 2.1 Activities During the Current Reporting Period

- Meetings

There were no meetings during the current reporting period.

- RI/FS Work Plan

The Work Plan was approved on June 7, 1991, with some added modifications by DNREC and EPA. Work Plan revisions were issued in October 1991 to reflect revised consultant responsibilities.

- Historical Research and Aerial Photo Survey

The Phase IA Archaeological Assessment Report was completed by the Versar archaeological subcontractor, Engineering-Science, Inc. (ES), and submitted for review on May 31, 1991. This report presented recommendations for a Phase IB assessment, and was reviewed by the Delaware State Historic Preservation Office, DNREC, and EPA. Comments were received from the Historic Preservation office and DNREC in late August 1991. Comments were received from EPA on September 17, 1991. ES will review and address the comments before preparing a work plan and schedule for the proposed Phase IB/II work.

The background sources inventory research is ongoing.

- Ground-penetrating Radar Survey

This activity has been completed. The On-site Geophysical Report was completed by Engineering-Science and was submitted to DNREC and EPA on May 31, 1991. Comments were received from DNREC and EPA on October 25, 1991 and will be addressed in November 1991.

- Soil Boring Program (On- and Off-site)

Laboratory results from the March on-site soil sampling program were reviewed and the On-site Source Characterization Study was submitted to DNREC and EPA on September 16, 1991.

Off-site borings were drilled between June 12 and June 19, 1991. These borings were used to determine the optimum locations of Well Clusters No. 12 and 13, as discussed in a memo from Versar to DNREC and EPA on July 16, 1991. DNREC and EPA approved relocating these two well clusters on July 23, 1991.

- Pathway Analysis

Off-site borings for the pathway analysis task were drilled between June 19 and June 21, 1991. Ten borings were made to approximate depths between 4 and 10 feet. Selected soil samples were submitted to the Versar laboratory for volatile and semi-volatile organic analyses. Tar Branch low flow surface water sampling was performed on June 20, 1991, and samples were submitted to the Versar laboratory. Storm-flow sampling of Tar Branch was performed on July 23, 1991. These samples also were submitted to the Versar laboratory. Results from these analyses and field observations are being evaluated and will be used to determine if a pathway exists or existed between the site and Tar Branch. The interim report was submitted to DNREC and EPA on October 10, 1991.

- Air Quality Evaluation

The air quality evaluation is currently being performed. A report is expected to be submitted to DNREC and EPA in November 1991. This task also is addressed in Section 2.5, Problems Encountered and Actions Taken.

- Monitoring Well Installation

Drilling of Phase I monitoring wells commenced on June 26, 1991 at Well Cluster 11 and was completed on August 7, 1991. All wells were developed by August 9, 1991. As approved by DNREC and EPA, Well Cluster 12 was moved approximately 400 feet southwest, and Well Cluster 13 was moved approximately 550 feet south from the locations originally specified in the Work Plan, based on results of the off-site soil boring program.

As approved by DNREC, monitoring well 14C was not installed during Phase I of the monitoring well installation program (memorandum, Versar to DNREC and EPA, April 25, 1991, and phone log from DNREC to Chesapeake Utilities, August 3, 1991).

Soil samples taken during monitoring well installation are being analyzed by the laboratory. A report discussing details of the off-site boring program, well installation, and subsequent ground-water sampling will be submitted in November 1991.

- Ground-water Quality Evaluation

Ground-water sampling of all on-site and off-site wells occurred between August 12 and 17, 1991 with the exception of Well 11D semi-volatile organic sampling, as discussed in Section 2.4. All wells were purged and sampled as described in the Work Plan. Samples for the analysis of volatile and semi-volatile organic compounds, and dissolved and total metals, were submitted to the laboratory. Results of these analyses will be presented, along with details of the well installation, in the November 1991 Ground-Water Quality Evaluation Study Report.

- Aquifer Testing

Aquifer pump tests Nos. 1 and 2 were performed between August 12 and 14, 1991. These tests were conducted at Well Clusters 11 and 12, respectively, as described in the Work Plan. Pumping from the City of Dover water supply wells 9 and 12 was stabilized as much as possible during that week. Aquifer pump test No. 3 at the on-site Well 15 is scheduled for November 1991.

Aquifer slug tests were performed on August 26 and 27, 1991, as described in the Work Plan. Wells 11A, 2A, 6A, 7A, 10A, 8A, 13A, and 12A were tested. The long-term water level monitoring at Well 11D was completed in October 1991.

- Conditional Environmental Impact Analysis

There was no activity on this task during this time period.

- Development of RI/FS Report

There was no activity on this task during this time period.

## **2.2 Results of Tests, Sampling or Analytical Data**

Results of the off-site pathway analysis sampling (soil borings, low-flow and storm-flow surface water) were received from the laboratory in July and August 1991 and are included in the final interim Pathway Analysis Report. Results of the ground-water sampling and well installation soil sampling were received from the laboratory in September 1991, are being evaluated, and will be included in the interim Ground-water Evaluation Study Report.

## **2.3 Anticipated Data and Activities for the Next Month**

- RI/FS Work Plan

The Work Plan has been finalized and approved by EPA and DNREC. Revisions concerning consultant responsibilities were issued in October 1991. These revisions are being reviewed by DNREC.

- Historical Research and Aerial Photo Survey

The Phase IA Archaeological Assessment Report was submitted on May 31, 1991. Comments were received from the Delaware Division of Historical and Cultural Affairs, and DNREC, in late August 1991, and from EPA on September 17, 1991. The comments are being addressed and modifications to the Phase IA will be prepared in November 1991. A meeting to discuss potential Phase IB/II work will be scheduled as soon as possible.

- Ground-penetrating Radar Survey

The interim GPR/EM Report was submitted to DNREC and EPA on May 31, 1991. Comments were received from DNREC and EPA on October 25, 1991. Revisions to the report will be issued in December 1991.

- Soil Boring Program (On- and Off-site)

Activities under this task have been completed.

- Pathway Analysis

The interim Pathway Analysis Report was submitted to DNREC and EPA on October 10, 1991.

- Air Quality Evaluation

The Air Quality Evaluation Report will be submitted in November 1991.

- Phase I Monitoring Well Installations

Activities under this task have been completed.

- Ground-water Quality Evaluation

Results of the ground-water quality sampling were evaluated in October 1991. These data will be included in the Ground-water Evaluation Report.

- Aquifer Testing

The aquifer test at Well 15 will be conducted in November 1991.

- Conditional Environmental Impact Analysis

No activity is anticipated on this task during this time period.

- Development of RI/FS Report

No activity is anticipated on this task during this time period.

#### **2.4 Suggested Additional Activities and Actions Taken**

Versar received a request from EPA that a semi-volatile organic analysis sample be taken from the City of Dover Well No. 9, screened in the Cheswold Aquifer. This well is adjacent to monitoring well 11D. EPA has given permission to use these sample results as a replacement for the later scheduled semi-volatile sample that was to be taken from City Well No. 9 in place of monitoring well 11D. A sample and a duplicate sample were taken on July 12, 1991. Results were sent to EPA on September 18, 1991.

#### **2.5 Problems Encountered and Actions Taken**

Information on leaking underground storage tanks in the vicinity of the site has been difficult to obtain from the State of Delaware. This has impeded progress on the background sources inventory. Versar performed a walking survey of the area on September 5, 1991. This was combined with a search of available local records to determine the locations of possible leaking tanks in the area.